REMARKS

The Office Action has been carefully reviewed. Reconsideration and allowance of the claims in light of the foregoing amendments is respectfully requested. A petition and fee for a three-month extension of time is submitted herewith. In addition, an Information Disclosure Statement with fee is submitted herewith.

Claims 1-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Aldrich catalog 1992-1993. The Office Action stated that claims 1-17 are directed to a chiral glycerol labeled with at least one 13C atom and 0-4 Deuterium carbon-bonded atoms. Aldrich catalog teaches glycerol (page 649, last entry). ^{13}C and Deuterium are naturally occurring isotopes and are therefore present in the glycerol taught by Aldrich. One can easily calculate the abundance of each of the claimed compounds in the glycerol taught by Aldrich.

For Example: the compound of claim 2 has isotopic Carbons. To calculate the abundance of that compound (R or S) one can use the Table provided by McLafferty (Interpretation of Mass Spectra, W.A. Benjamin, Inc., 1966, inside of the rear cover). Two ^{13}C is 0.016^2 = .000256% of molecules of glycerol have two 13C. There are 3 ways that the two labeled carbons can be distributed in glycerol: 1-2, 1-3, and 2-3. Since 1-2 and 2-3 are identical, 2/3 of glycerol having two ^{13}C will have the labeled carbons in the correct position. 2.56×10^{-4} multiplied by 2/3 = 1.707×10^{-4}. Taking into account R and S stereoisomers: $1.707 \times 10^{-4} / 2 = 8.53 \times 10^{-5}$ percent is the % abundance of either isomer of claim 2 in solution of glycerol described by Aldrich.

Applicants submit that the present claims are each directed to a "labeled" asymmetric chiral glycerol, such asymmetric chiral labeled glycerols including at least one chiral atom, from one to two ^{13}C atoms, and from zero to four deuterium atoms bonded directly to a carbon atom. The Office Action referenced an <u>unlabeled</u> commercial sample of glycerol and the knowledge that ^{13}C and Deuterium (^2H) are both naturally occurring isotopes as anticipating the presently claimed invention directed to "labeled" glycerols.

Applicants submit that the term "labeled" (as in a "labeled compound") is well known and recognized by those skilled in the art and the term refers to molecules having a distribution of the isotopes within the molecules other than the natural distribution or naturally occurring distribution. The natural distribution, (i.e., that found in

nature), is what would be present in the Aldrich supplied glycerol cited by the Office. Thus, "asymmetric chiral labeled glycerol(s)" as presently claimed are simply not anticipated by the knowledge of natural distribution in an unlabelled sample. In the present specification and examples, Applicants specifically describe and teach how to make "asymmetric chiral labeled glycerol(s)". Only labeled compounds would have utility as precursors to elucidate biosynthetic pathways of pharmaceutical pathways as set out in the present specification at page 9, lines 21-25. The unlabeled glycerol (from Aldrich) cited by the Office would not permit such utility. Applicants submit that claims 1-3 and 5-16 are simply not anticipated by the same generic chemical structure only having the natural abundance and distribution of isotopes rather than the precise isotopic labeling of the presently claimed invention.

Claims 1 and 17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Pitlik et al. (Journal of labeled Compounds and Radiopharmaceuticals, 1997 Vol XXXIX, No 12, pages 999-1009). The Office Action stated that claim 1 is directed to a chiral glycerol labeled with at least one 13C atom and 0-4 Deuterium carbon-bonded atoms. Claim 17 is directed to (R) or (S) 1,2 $-^{13}C_2$ glycerol with one or more deuterium atoms. Pitlik et al. disclose (R) or (S) 1,1 dideuterated 1,2- $^{13}C_2$ glycerol (page 1002, Scheme 4, compound 22).

Applicants cancelled claim 17 and amended claim 1 to overcome Pitlik et al. Claim 1 is now limited to a subgenus, (i.e., selected asymmetric chiral labeled glycerols from among (2S) [2-^{13}C]glycerol and (2R) [2-^{13}C]glycerol). Dependent claims 7 and 8 remain as other species within this subgenus. Such a subgenus is neither taught nor suggested by Pitlik et al. Accordingly, this rejection is urged to be withdrawn.

Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Cho et al (Journal of Organic Chemistry, 1993, 58, 7925-7928). The Office Action stated that Cho et al. disclose 1- ^{13}C glycerol (page 7926, column 1, Figure 1, bottom left).

Applicants amended claim 1 to overcome Cho et al. As noted earlier, claim 1 is now limited to a subgenus and that subgenus is neither taught nor suggested by Cho et al. Accordingly, this rejection is urged to be withdrawn.

In view of the foregoing amendments and remarks, claims 1-3 and 5-16 are urged to be allowable over 35 U.S.C. 102(b). If the Examiner believes there are any unresolved issues despite this amendment, the Examiner is urged to contact the

applicants' attorney undersigned below for a telephonic interview to resolve any such issue. A favorable action is solicited.

Respectfully submitted,

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